In the Matter of
Federal Communications Commission 96-93

COMMENTS

ON

NOTICE OF PROPOSED RULEMAKING

Federal-State Joint Board on
Universal Service
CC DOCKET NO. 96-45

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submitted by:

BRITE VOICE SYSTEMS, INC.
7309 EAST 21ST STREET NORTH
WICHITA, KANSAS 67206, U.S.A.

Attention: David F. Hemmings
Executive Vice President

Date: April 8, 1996

To: Office of the Secretary,
Federal Communications Commission,
Washington, D.C. 20554

cc. International Transcription Service
Room 640,
1990 M Street, N.W.
Washington, D.C. 20036

re: CC Docket No. 96-45 Universal Service
Notice of Proposed RuleMaking

With respect to the Honorable Reed E. Hundt, Chairman, and distinguished members of the Federal-State Joint Board on Universal Service, Brite Voice Systems, Inc. would like to make comment on the subject Notice to assist the Board in defining the services and target consumers that can be supported by Federal universal service support mechanisms.

In section 2 of this Notice, the Board seeks mechanisms for consumers in all regions of the Nation to avail themselves of Quality services at just, reasonable and affordable rates. Further, such consumers who have low incomes, or live in rural, insular and high cost areas, or are scholars, in need of emergency services and health care, or library readers should have advanced services and information services reasonably comparable to those services and rates in urban areas. It is our experience that such services could be made available in 1996 to meet the needs of these consumers and satisfy the underlying Congressional intent. As a result, it should be the Board's disposition that the core services, described in section 16 of the Notice, receiving universal services support should be equally available to urban and all other consumers nationwide at similar and affordable rates.

Some of the Quality services we believe should be addressed by the Board are as follows. In partial response to section 17 of the Notice, we contend that universal service support for each of these Quality services would not act as a barrier to entry by new competitors nor favor one technology over another, perhaps more efficient technology – provided the major U.S. network operators once again are not allowed to become monopolistic in their business practices.

A. Information Services

Information services on telephony, transmitted to communities via satellite and to individual consumers via satellite and mobile phones. The largest information content supplier over telephony in the world is located in Kansas, where telephony information services using voiced bites are scripted, edited and transmitted in a way similar to CNN Headline News on television using video bites. With 60 journalists and 14 studios, this facility transmits its own domestic and international news, weather, sports, financial and other information content to over 200 communities around North America (and to countries as far away as Thailand). This information service provides about 450 program updates each and every day. There are also over 5,000 library programs on such topics as health care and medical services, automobile care, and educational subjects. Since the services are already on a satellite with a footprint across the United States, such services can be offered to consumers in rural, insular and high cost areas with the same quality, diversity and performance as that offered to consumers in urban areas. Such services are typically delivered to a common downlink in a community, to a distribution site such as a newspaper office or a radio station to which local free calls can be made on wireline phones, or low-cost calls on wireless phones.

Rates to consumers are often reduced to zero by local advertising. Alternatively, information services can be paid for by airtime on a wireless network; in Oregon, a newspaper and the local wireless network operator have joined to provide information service to consumers on wireless phones.

Some performance-based measurements for information services, as requested in section 4 of the Notice, are:

- Percentage coverage on the "ground" within a local phone call distance for all areas in all regions of the Nation;
- Diversity of content meeting the intent of this Quality service, and the percentage by time of other content allowed but not part of the Quality service (e.g., local advertising);

B. Messaging with Virtual Telephony

Messaging with virtual telephony enables low-income, rural, insular, high cost area and homeless consumers, scholars, consumers out of work or in need of protection from unwanted calls (e.g., the aged) to have a mailbox number without owning a phone – wireline or wireless. Callers communicate with mailbox owners by calling a regular 7- or 10-digit number as if the mailbox owner actually had a phone. The mailbox owner can retrieve messages at will from a pay-phone or any other phone; local calls are free for a private wireline phone. This service, of appeal to those consumers referred to in section 57 of the Notice, offers the mailbox owner a professional "front" which uses an advanced service in an innovative manner; the caller simply notes that the mailbox owner is "not available" and leaves a message. Further, this service can be provided on the same system as a voice mail service to an urban subscriber – and in multiple languages to accommodate ethnic minorities. For example, on the island of Mauritius in the Indian Ocean, a single Quality service has been installed by a U.S. company to simultaneously provide voice mail to the urban consumers and messaging with virtual telephony to low-income, rural and insular consumers – in the same system.

The cost of owning a mailbox is typically one third to one fifth that of owning a phone on a monthly basis.

Some performance-based measurements for messaging with virtual telephony are:

- Percentage take-up of this Quality service by consumers without any phone in all regions of the Nation;
- Type of consumers taking up this service and their monthly usage profile;
- The cost of this Quality service by service provider and region of the Nation.

C. Speech Activation

Speech activation is now being used in the United States and many other nations as an alternative to touch-tone for one-word rapid access to the called party. Voice dialling is established in about 50 markets in the United States today (and 20 other markets around the world). With one word, such as "Office", "Emergency", or "Voicemail", a system is available to the consumer to dial the number automatically. Such word-dial string pairs are preset in a programmed speed-dial directory for each consumer on the network. The consumer can also speak "Dial 202 123 4567", or the like, for numbers not programmed in the directory. In the consumer's wireline environment (typically the office or home), background noise is low and speech activation is comparatively easy to implement. However, in a consumer's wireless environment (typically the moving vehicle, a street sidewalk, or a noisy restaurant), the need for effective high noise rejection is essential. This speech activation issue in wireless environments has been solved both for hand-held and hands-free operation of a wireless phone in all of the 70 markets worldwide. Further, it has been solved not only in American English, but also in such languages as Spanish, French, Cantonese, Mandarin, Greek and other dialects of English around the world. In some areas of the United

States and other parts of the world, access to the network using touch-tone is not possible; in these situations the use of voice commands is an effective and efficient option.

At the Cellular Telecommunications Industry show in March 1996 in Dallas, speech-activated voice mail was introduced for message retrieval in a high-noise environment – one word commands such as "Play", "Save", or "Erase" are used instead of touch-tone digits. The flexibility of this speech-activation approach to telephony usage is at least as good as the touch-tone approach. Since it is typical to expect that about 50 percent of all business calls from a vehicle are to voice mail, such as service with speech activation makes driving and touch-tone dialling unnecessary, safety and convenience a prerequisite of good driving, and "Look Ma, No Hands" – the consumer's eyes never leave the road and hands never leave the wheel while dialling is completed. Some countries have a law which prohibits dialing and driving at the same time.

In 1995, a Hong Kong network operator introduced a Voice Directory service, which in 1996 is being emulated by another network operator in Singapore. This "Information Link" with one-word speech-activated commands accesses financial information, emergency services, sports results, taxis and airlines, ticketmasters, and other hotline services – in more than one language. A similar service in the United States could satisfy section 21 of the Notice through advanced service access to emergency services for public health or public safety needs. Other speech-activated services from wireline and wireless phones can be developed to be consistent with the public interest, convenience and necessity.

In July 1995, a long distance calling card service provider based in Dallas introduced a card which allows the consumer to access the network from any phone, touch-tone or rotary, domestically and internationally to place a call without operator assistance. To make a call, the consumer enters a voiced password and a voiced PIN number of 5 digits; with an additional feature built into the network, this speech activation method of calling card verification is 100% accurate, because fraud is reduced using the voiceprint of the caller.

Two other services using speech activation are worthy of note: a) fraud control by the consumer entering a voiceprint word recognized only as that specific caller and a voiced PIN, and b) directory call completion by the wireless network operator being enabled to recognize wireline directory service numbers and automatically outdial that number to the required destination for the consumer, without the consumer making another dialed call. These services are already installed in Singapore and Canada respectively. The latter service will be operational in a part of the United States later this year.

In partial response to sections 16 and 19 of the Notice, we urge that touch-tone service be made available universally to receive support from the Universal Service Fund. Retrieval of information, educational services, messages, and text is performed most effectively with touch-tone. However, as an enhancement to touch-tone, the use of a consumer's most common communications tool – the voice – is another service that can serve the same general function as touch-tone service. We urge that speech-activated services be included in the Board's deliberations for support by the Universal Service Fund. This is consistent with the public interest, convenience and necessity.

The cost of speech-activated services are now being incorporated into the base service monthly charge of a phone in some countries. In the United States, where these services started in 1993, consumers still pay a small monthly surcharge for voice dialling. We anticipate that this Quality service will ultimately be encouraged to become free of surcharge to the consumer in the United States. It will require a second generation voice mail service (the most common base service today) with speech activation and personal communications features to enable this encouragement to take hold in the industry. We project that this could occur in many regions of the Nation by late 1998.

Some performance-based measurements for Quality speech activated services are:

- Percentage take-up of this Quality service by consumers in all regions of the Nation;
- Type of consumer taking up this service and their monthly usage profile;

– The cost of this Quality service by service provider and region of the Nation.

D. Prepaid Calling

Prepaid calling can now be made available for both wireline and wireless phone service consumers. Some wireless network operators have rejected as many as 25 percent of all applicants for new service because these consumers are credit challenged; the same network operators have as many as 10 percent of their users who do not pay their monthly bill. Rather than cutting service for these users, with the prospect of losing their business, the network operator would prefer to migrate these consumers to another, prepaid calling service. The concept of this telecommunications mechanism is the same as buying gas to drive a vehicle for an approximate mileage or paying a mortgage in advance to live for a month in a dwelling. Consumers pay for phone service in advance in one of several denominations.

Using this new service the network operator could market, from any store, a "blister-packed" phone with an established account and prepaid minutes of usage to a consumer – an example of this is the Amigo phone marketed by Rogers Cantel in Canada. This phone does not need to be different from any other phone; however, the network switch database is programmed to know that this phone number is operable only on a prepaid account. After usage, this consumer is then notified by an automated spoken warning through a whisper, when the account balance is at a predetermined low level and requires refreshment. Such refreshment can be performed when the consumer buys a "lottery-like" disposable ticket, scratches it to reveal a number and enters the number by touch-tone or by voice over the phone to increase the consumer's account by the value of the ticket. This network can simultaneously provide prepaid services not only to low-income consumers, but also to urban and credit-challenged consumers.

An alternate service is the debit or calling card, which is more complex to use than prepaid calling. The consumer with the debit or calling card calls an 800 or free-phone number and enters a PIN or passcode to obtain approval to enter the remaining called party digits. An adjunct service is "warm billing" which enables any consumer to poll the network for a check on his/her ordinary or prepaid account balance at any time during the month. Another adjunct service is the the capability to limit called numbers to a predefined small set (e.g., truckers are given a phone to make calls only to preset office locations or for emergencies).

The purpose of prepaid calling is to control expenditures for small businesses, consumers in high cost areas, low-income consumers, occasional users,scholars, temporaries and rental phones. The same system is applicable to both urban and rural or insular telecommunications simultaneously. Brite is introducing a prepaid service at a major event in the summer of 1996.

The concept of prepayment is commonplace in life in our Nation. We use this concept to live in a house, drive a vehicle, watch a movie at the cinema, or pay taxes at source. Telecommunications services should offer a similar prospect for those consumers unable to satisfy urban area-compatible credit ratings. This Quality service (enabling all consumers to afforably access numerous information and emergency services, and participate inthe benefits of universal service) then becomes cash-based, which should be an attraction to any network operator. This concept could also be a mechanism for collecting universal service contributions, as sought in section 10 of the Notice. It is also a self-regulating mechanism to limit service usage which cannot be paid for by some consumers. Section 14 of the Notice and the 1996 Act requires standards for evaluating the affordability of telecommunications services; phone calling affordability is largely predetermined by the consumer if it is prepaid.

Some performance-based and affordability measurements for prepaid calling are:

- Percentage take-up of this Quality service by consumers in all regions of the Nation;
- Monthly usage profiles (e.g., tickets purchased) by area in all regions of the Nation;
- The premium (if any, compared to regular calling) charged by service providers for this Quality service by region of the Nation.

E. Two-way Paging and Short Text Messaging

With simple two-way paging and/or short text messaging on a wireless phone, consumer needs for access to information services, emergency facilities, remote health monitoring for the aged, and a "call me" instructions can be summarily satisfied.

Some performance-based measurements for paging and/or short text messaging are:

- Percentage take-up of this Quality service by consumers in all regions of the Nation;
- Type of consumer taking up this service and their monthly usage profile;
- The cost of this Quality service by service provider and region of the Nation.

F. Internet

Internet is becoming important advanced information access to schools and libraries in all regions of the Nation. Through the use of appropriate firewalls it is now possible to control the type and source of information passed to scholars and readers. Internet is also an important source of information and electronic mail (i.e., "e-mail") for home-based consumers, especially as the aged become more computer-literate. Further, voice, facsimile and text messaging services are now being linked with the Internet for three primary purposes: a) e-mail notification, i.e., "you have three e-mails available" which are then picked up by a computer , b) e-mail mesaages, i.e., the consumer can receive in a spoken form either the title of each e-mail or the entire e-mail using text-to-speech services, or c) maintenance links to remote unmanned equipment for status checks, new software downloading or general monitoring. In 1996, another Internet service is emerging – the setup of least cost routing for individual consumer telephone calls. This service, requiring both a computer and phone, makes long-distance calls more economical for many consumers.

Performance-based measurements for these services would be similar to those already being developed for Internet access and usage.

In partial response to section 24 of the Notice, we would urge the Board to extend their support for rural, insular, and high-cost areas to all users in these areas, not just to residential users or residential and single-line businesses. Satellite and wireless network operators today can provide significantly more users with more services and information content than most wireline network operators. Community access costs to schools, libraries, and other local centers can be amortized over consumers in the local community, and perhaps augmented by local advertising. Cash-based service delivery should have better appeal to consumers in these areas.

Finally, as stated in section 66 of the Notice, we urge the Board to recognize the rapidly-evolving nature of these Quality services. The list of services receiving universal service support should continue to evolve in the context of regulatory objectives and promoting competition. In response to section 81 of the Notice, wireless technologies have become the most efficient way of delivering any of the Quality services described herein.

David F. Hemmings per DM.

David F. Hemmings
Executive Vice President
Brite Voice Systems, Inc.
7309 East 21st Street North
Wichita, Kansas 67206